

$$\text{BASE} + \text{BALL} = \text{GAMES}$$

$$G = 1$$

$$\text{B A S E}$$

$$E + L = S$$

$$+ \text{B A L L}$$

$$E + L = S + 10$$

$$\text{G A M E S}$$

$$E = S - L + 10$$

$$S + L = E$$

$$S + L = S - L + 10$$

$$S + L = S - L + 10$$

$$2L = 10$$

$$\cancel{L = 5} \quad L = 5$$

Now,

$$E + L = S$$

$$S - E = L$$

$$S - E = 5$$

$$(S, E) = (\cancel{5}, \cancel{10}) (\cancel{6}, \cancel{1})$$

$$(7, 2) (9, 4)$$

$$(8, 3)$$

$$B + B = A + \text{Carry}$$

$$B = 5X$$

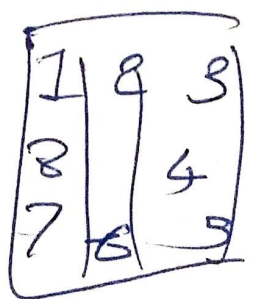
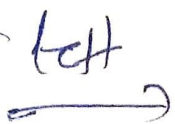
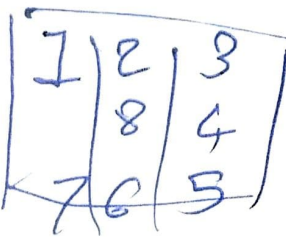
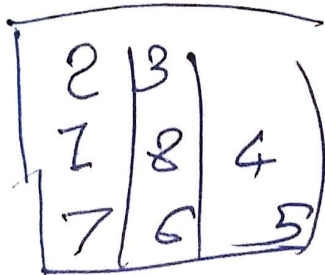
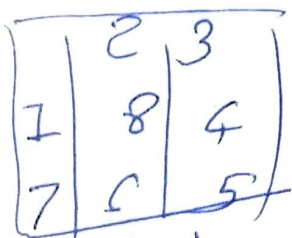
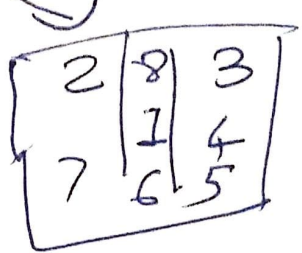
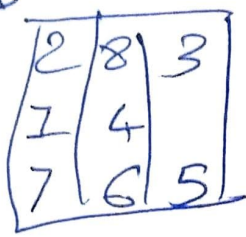
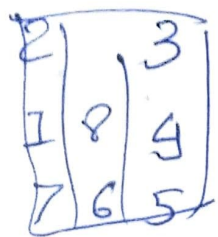
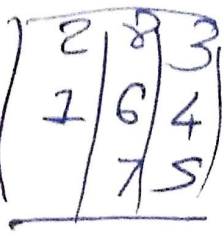
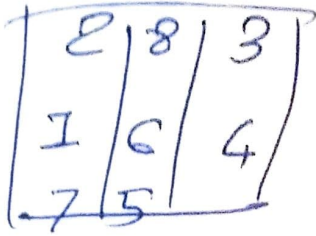
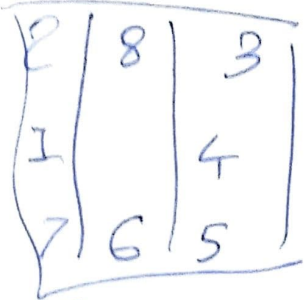
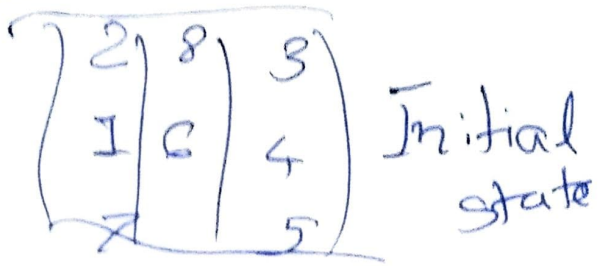
$$\text{let } B = 7$$

$$(S, E) = (8, 3)$$

$$\text{we get } A = 4$$

$$\begin{array}{r}
 7483 \\
 + 7455 \\
 \hline
 14938
 \end{array}$$

Final Answer



goal state

## Predicate Logic Form.

1.  $\forall x : \text{games}(x) : \text{like}(\text{Sachin}, x)$
2.  $\text{games}(\text{cricket}) \wedge \text{games}(\text{basketball})$
3.  $\forall a : \forall b : \text{play}(a, b) \wedge \text{ill}(a) \rightarrow \text{games}(b)$
4.  $\text{play}(\text{Saurav}, \text{volleyball}) \wedge \text{fit}(\text{Saurav})$
5.  $\forall c : \text{play}(\text{Saurav}, c) \rightarrow \text{play}(\text{Kapil}, c)$
6.  $\forall d : \text{fit}(d) \rightarrow \text{ill}(d)$
7.  $\forall e : \neg \text{ill}(e) \rightarrow \text{fit}(e)$

Conclusion :

$\text{likes}(\text{Sachin}) \text{Volleyball}$